



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,384	07/07/2003	Steven R. Hilliard	27234.01	7445
22465	7590	05/06/2005	EXAMINER	
PITTS AND BRITTIAN P C			DEB, ANJAN K	
P O BOX 51295			ART UNIT	PAPER NUMBER
KNOXVILLE, TN 37950-1295			2858	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Suppl.

**Notice of Allowability**

Application No.	Applicant(s)	
10/614,384	HILLIARD ET AL.	
Examiner	Art Unit	
Anjan K. Deb	2858	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/18/2004.
2. ☒ The allowed claim(s) is/are 1-35, 37, 38.
3. ☒ The drawings filed on 07 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|   | 9. <input type="checkbox"/> Other _____   |

### **DETAILED ACTION**

1. This office action is in response to amendment filed 11/18/2004.

#### ***Examiner's Amendment***

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

In claim 15, first line replace, "circuit of Claim 15" with --circuit of claim 12--

#### ***Allowable Subject Matter***

2. Claims 1-35, 37,38 are allowed.

#### ***Pertinent Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sako (US 6,104,199) discloses circuit for detecting loop inductance (short circuit of coil of a magnetic head) connected between two points (Hx, Hy) comprising a pair of driver circuits (I<sub>1</sub>, I<sub>2</sub>), and producing a digital output (out) representing the state of the coil (Fig. 1). Sako lacks

Art Unit: 2858

demodulation circuit in electrical communication with the pair of driver circuits and producing a digital signal representing an inductance of the loop (coil).

Shimizu (US 5,592,097) discloses circuit for detecting loop inductance (LH) connected between two points (4, 6) comprising a pair of driver circuits ( $Q_1, Q_3$ ) and producing a digital output 13 representing the state of the coil (Fig. 5). Shimizu lacks demodulation circuit in electrical communication with the pair of driver circuits and producing a digital signal representing an inductance of the loop (coil).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is (571)-272-2228. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le, can be reached at (571)272-2233.

Application/Control Number: 10/614,384

Page 4

Art Unit: 2858



**Anjan K. Deb**

Tel: 571-272-2228

Patent Examiner

Fax: 571-273-2228

Art Unit: 2858

E-mail : [anjan.deb@uspto.gov](mailto:anjan.deb@uspto.gov)

4/28/05